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SEDIMENTS

Subject:

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site  
Supplemental Remedial Investigations/Feasibility Studies  
Twelfth Semi-Annual Progress Report (August 2012 to January 2013) and  
Sixth Annual Area-Specific Work Reports

Date:

February 15, 2013

Dear Jim:

Contact:

Michael J. Erickson, P.E.

Attached is the twelfth semi-annual progress report for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site Supplemental Remedial Investigations/Feasibility Studies (SRI/FS). This progress report is submitted as per Section 7.2 of the Statement of Work (SOW) for the February 2007 Administrative Settlement Agreement and Order on Consent (AOC) for Remedial Investigations/Feasibility Studies (Docket No. V-W-07-C-864). Per Section 7.2 of the SOW, the semi-annual progress reports "shall address all areas of the Site where Respondents perform SRI/FS activities and shall summarize overall progress in completing the work required by the AOC and SOW".

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B0064539.0004.00014

As per Section 1.1.1 of the SOW, "for each Area or OU of the Site with ongoing work, including ongoing monitoring and/or operation and maintenance of existing systems, the Respondents shall continue any such ongoing work unless modifications are approved in writing by [the United States Environmental Protection Agency] USEPA. Reporting of any such ongoing work will be in accordance with the Schedule on Exhibit A of this SOW". To meet this requirement, this letter report also includes the sixth annual Area-specific work reports for Areas 4 through 7. The Master Schedule for the Site, which was submitted in March 2007, states "As appropriate, the annual Area-specific work reports may be included as an element of the Semi-Annual Progress Reports." As stated in Exhibit A, these reports are to be submitted "for each Area, annually until USEPA's approval of an Area-Specific Work Plan for that Area". USEPA approved a work plan for Area 1 as part of the AOC, approved a work plan for Area 2 in December 2010, and approved a work plan for Area 3 in October 2012; therefore, there are no annual work reports included for Areas 1, 2, and 3.

If you have any questions, please do not hesitate to contact me.

Sincerely,

ARCADIS



Michael J. Erickson, P.E.  
Vice President

Attachment

Copies:

Michael Berkoff, USEPA  
Ramon Mendoza, USEPA  
Paul Bucholtz, MDEQ  
Judith Alfano, MDEQ  
Sharon Hanshue, MDNR  
Jeff Keiser, CH2M HILL  
Todd Goeks, NOAA  
Jessica Winter, NOAA  
Julie Sims, NOAA  
Kathy Huibregtse, ENVIRON  
Richard Gay, Weyerhaeuser Company  
Martin Lebo, Weyerhaeuser Company  
Garry Griffith, P.E., Georgia-Pacific LLC  
Chase Fortenberry, P.G., Georgia-Pacific LLC

**SEMI-ANNUAL PROGRESS REPORT FOR THE ALLIED PAPER, INC./PORTAGE CREEK/  
KALAMAZOO RIVER SUPERFUND SITE SRI/FS  
AREA 1 (MORROW DAM TO PLAINWELL DAM)  
AREA 2 (PLAINWELL DAM TO OTSEGO CITY DAM – OTSEGO CITY IMPOUNDMENT)  
AREA 3 (OTSEGO CITY DAM TO OTSEGO DAM – FORMER OTSEGO IMPOUNDMENT)**

**REPORT #12, AUGUST 2012 TO JANUARY 2013**

**PREPARED BY ARCADIS  
ON BEHALF OF GEORGIA-PACIFIC LLC**

**SUBMITTED TO**

**JAMES SARIC, REMEDIAL PROJECT MANAGER  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Semi-Annual Progress Report for the Allied Paper, Inc./Portage Creek/  
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**Areas of the Site where Supplemental Remedial Investigations/Feasibility Studies (SRI/FS) Activities Have Been Performed Pursuant to the February 2007 Administrative Settlement Agreement and Order on Consent (AOC) and Statement of Work (SOW)**

- Operable Unit 5 (OU 5) – Kalamazoo River from Morrow Dam to Lake Michigan and Portage Creek from Alcott Street to the confluence.

**Summary of Overall Progress in Completion Work Required by the AOC and SOW –  
Area 1, Area 2, Area 3, and Multi-Area**

**AOC Requirements**

- Validated data that have been generated to date have been submitted as part of monthly progress reports, as required by paragraph 48a of the AOC and Sections 1.1.2 and 2.1 of the SOW. The six monthly progress reports generated during the August 2012 to January 2013 period were submitted on time, as required by Section 7.1 of the SOW, paragraph 19a of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863), and paragraph 19a of the 2009 AOC for Removal Action (Docket No. V-W-09-C-925).
- The United States Environmental Protection Agency (USEPA) and Michigan Department of Environmental Quality (MDEQ) were notified in advance of sample collection activities, as required by paragraph 48b of the AOC and Section 2.1 of the SOW.
- On August 13 and September 10, Georgia-Pacific LLC (Georgia-Pacific) notified USEPA of its payments made for the Operable Units 2 and 5 (OU2 and OU5) cost recovery packages in accordance with paragraph 75b of the AOC.
- On November 6, Georgia-Pacific received a cost recovery package from USEPA regarding the former Plainwell Impoundment in accordance with paragraph 36a of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863). Payment was submitted on November 13 in accordance with paragraph 36b of the 2007 AOC for Removal Action.
- On November 14, the Michigan Department of Attorney General (MDAG) wrote to USEPA regarding the completion of work under paragraph 77 of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863) and post-removal site control for the former Plainwell Impoundment.
- As per paragraph 92 of the AOC, paragraph 82 of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863), and paragraph 71 of the 2009 AOC for Removal Action (Docket No. V-W-09-C-925), ARCADIS continues to maintain insurance naming USEPA as an additional insured. No changes to the policy have occurred since last confirmation.
- As per Section XXVI of the AOC, Section XXIX of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863), and Section XXVI of the 2009 AOC for Removal Action (Docket No. V-W-09-C-925), Georgia-Pacific is maintaining the financial assurance related to those AOCs.

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- As per paragraph 92 of the AOC, ARCADIS has ensured that subcontractors satisfy all applicable laws and regulations regarding provision of worker's compensation insurance.

**SOW Requirements**

**Task 1. Project Scoping and SRI/FS Planning Documents**

*Submittals approved by USEPA and finalized:*

- On October 2, ARCADIS submitted a revised *Area 3 Proposed Survey and Field Sampling Plan* (Area 3 Field Sampling Plan) to USEPA, based on comments received September 13 and 26 and discussions with agencies on September 10 and 18. On October 3, USEPA forwarded to ARCADIS a letter approving the Area 3 Field Sampling Plan.
- On November 15, ARCADIS submitted to USEPA a bank repair plan for the former Plainwell Impoundment and Plainwell No. 2 Dam Area. On November 20, USEPA provided ARCADIS approval with modification of the former Plainwell Impoundment and Plainwell No. 2 Dam Area fall 2012 bank repair plan technical memorandum.
- On December 7, ARCADIS forwarded to USEPA a letter regarding the proposed bank soil PCB sampling plan for Removal Area 10A of the former Plainwell Impoundment as per paragraph 17c of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863). On December 8, USEPA transmitted to ARCADIS the December 3 inspection report from Removal Area 10A of the former Plainwell Impoundment and conditional approval of the proposed bank soil PCB sampling plan. On December 11, Georgia-Pacific forwarded to USEPA a summary of issues resolved regarding the proposed bank soil PCB sampling plan for Removal Area 10A of the former Plainwell Impoundment.
- On December 31, the final *Former Plainwell Impoundment and Plainwell No. 2 Dam Area Bank Conditions Monitoring Report* (Final BCMR) was submitted to USEPA.

*Activities toward completion of other requirements:*

Area 1, including former Plainwell Impoundment and Plainwell No. 2 Dam Area

- On August 15, representatives of Georgia-Pacific, ARCADIS, MDEQ, the Michigan Department of Natural Resources (MDNR), U.S. Fish & Wildlife Service (USFWS), and NOAA met in Lansing, Michigan to discuss bank and channel issues at the former Plainwell Impoundment.
- On August 30, Georgia-Pacific, ARCADIS, USEPA, MDNR, MDEQ, and USFWS participated in the annual site walk of the former Plainwell Impoundment and Plainwell No. 2 Dam Area Time-Critical Removal Action (TCRA) areas.

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- On September 14, MDNR forwarded to ARCADIS draft comments from the Natural Resource Trustees (Trustees) and MDEQ regarding the bank monitoring program for the former Plainwell Impoundment and the Plainwell No. 2 Dam Area.
- On September 17, Georgia-Pacific, ARCADIS, USEPA, MDEQ, MDNR, USFWS, MDAG, and NOAA participated in a conference call to discuss bank maintenance for the former Plainwell Impoundment and the Plainwell No. 2 Dam Area TCRA projects.
- On September 18, ARCADIS forwarded to MDEQ and MDNR bathymetric survey data for the former Plainwell Impoundment. This letter was also forwarded to USEPA, USFWS and NOAA on September 21.
- On September 19, Georgia-Pacific, ARCADIS, MDEQ, and MDNR participated in a site walk at the former Plainwell Impoundment to discuss bank maintenance options.
- On October 1, MDNR provided to ARCADIS the final draft comments from MDNR, MDEQ, and the Trustees on the former Plainwell Impoundment bank monitoring effort.
- On October 3, ARCADIS submitted to MDEQ and MDNR an evaluation of hydraulic modeling near the former Plainwell Dam performed to evaluate the effects of remaining stored sediment on bank stresses.
- On October 4, Georgia-Pacific, ARCADIS, USEPA, MDEQ, MDNR, USFWS, MDAG, and NOAA participated in a conference call to discuss the former Plainwell Impoundment and Plainwell No. 2 Dam Area bank conditions.
- On October 24, ARCADIS forwarded to the Rolfe Family Trust a property access agreement for the former Plainwell Impoundment in order to perform bank repair construction work as per paragraph 23 of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863). The access agreement was signed by the Rolfe Family Trust on October 25.
- On October 25, Georgia-Pacific, ARCADIS, USEPA, and MDEQ participated in a site walk to discuss maintenance needs at the former Plainwell Impoundment.
- On October 26, USEPA forwarded a MDEQ/CDM Smith field report to Georgia-Pacific documenting an inspection of Removal Area 4A of the former Plainwell Impoundment that was completed on October 25.
- On December 11, bank maintenance work began in Removal Areas 4A and 6B and the Western Channel of the former Plainwell Impoundment, and in Removal Area 3A of the Plainwell No. 2 Dam Area. The installation of the hard armor portion of this work was completed on December 28, 2012. Terra Contracting, LLC of Kalamazoo, Michigan performed the bank maintenance work.

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- In January, Cardno JFNew installed coir log in Removal Area 3A of the Plainwell No. 2 Dam Area, seeded and mulched areas disturbed by the bank armoring work, and planted willow live stakes in Removal Area 6B of the former Plainwell Impoundment to complete the scheduled bank maintenance work for 2012.
- On January 9, ARCADIS filed a Freedom of Information Act (FOIA) request with MDEQ for items withheld from the March 2012 FOIA request related to the Area 1 SRI Report. MDEQ acknowledged receipt on January 11.
- On January 25, ARCADIS submitted to USEPA *Addendum 1 – Former Plainwell Impoundment and Plainwell No. 2 Dam Area 2012 Bank Conditions Monitoring Report*. This addendum documents bank maintenance work carried out in December and January in Removal Areas 4A and 6B and the Western Channel of the former Plainwell Impoundment, and in Removal Area 3A of the Plainwell No. 2 Dam Area.
- On January 28, US EPA notified Georgia-Pacific that an area of exposed geotextile located upstream of the Western Channel of the former Plainwell Impoundment had not received additional armor at the time the maintenance work was performed in December. Work to place additional armor in the identified area is scheduled to be completed in February, as weather allows.
- On January 31, ARCADIS transmitted to MDNR bank profile data for the Former Plainwell Impoundment and Plainwell No. 2 Dam Area.

Area 2

- On August 1, ARCADIS received comments from MDEQ regarding Area 2 data usability tables.

Area 3

- On September 10 and 18, Georgia-Pacific, ARCADIS, USEPA, and MDEQ participated in a conference call to discuss agency review of the Area 3 Field Sampling Plan.
- On January 21, ARCADIS transmitted to MDEQ the Area 3 database update.

Site-Wide

- On August 6, ARCADIS transmitted a database update to the National Oceanic and Atmospheric Administration (NOAA) for its Query Manager database.
- On August 13, ARCADIS submitted to MDEQ a Site-wide fish sampling permit application for fall 2012.

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*Submittals awaiting completion:*

- Georgia-Pacific awaits USEPA's comments on the draft *Area 1 Feasibility Study Report* (Area 1 FS Report), submitted October 30.
- Georgia-Pacific awaits USEPA's comments on the draft *Area 2 Supplemental Remedial Investigation Report* (Area 2 SRI Report), submitted November 1.

Task 2. Site Characterization

Area 1, including former Plainwell Impoundment and Plainwell No. 2 Dam Area

- On October 25 and 26, ARCADIS installed survey stakes to mark the area of bank repairs at former Plainwell Impoundment Removal Area 6B and Plainwell No. 2 Dam Area Removal Area 3A.
- On November 26, ARCADIS notified USEPA of the upcoming bank repair work in the former Plainwell Impoundment and Plainwell No. 2 Dam Area, which was scheduled to begin the week of December 3.
- On December 3, USEPA, MDEQ, and Georgia-Pacific performed an inspection of Removal Area 10A in the former Plainwell Impoundment.
- On December 18, ARCADIS collected five individual samples of bank soils in Removal Area 10A of the former Plainwell Impoundment and submitted the samples to KAR Laboratories, Inc. (KAR) for PCB analysis. A previous composite sample from these locations collected on December 17 was also sent to KAR for PCB analysis.

Area 3

- During the week of July 9, ARCADIS completed Pine Creek sediment reconnaissance activities in the former Otsego Impoundment (Area 3). This included collection of four additional cores and processing of all ten cores from the Pine Creek impoundment. Representatives of MDEQ provided oversight.
- In September and October, ARCADIS obtained property access for Area 3 sampling from relevant property owners.
- During the week of September 17, ARCADIS set up staff gages in Area 3 and resurveyed existing erosion pin locations. During the weeks of October 15 and 22, ARCADIS measured staff gage height and surface water velocity at the Farmer Street bridge, the M-89 bridge, and the Otsego Dam. Per earlier discussions with USEPA and MDEQ, there was no oversight of these survey activities.
- In September and October, ARCADIS performed soil and sediment sampling in Area 3 with oversight by representatives of USEPA and MDEQ (with the exception of samples that may potentially be taken on the island owned by US Gypsum downstream of the Otsego City Dam – pending a signed property



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access agreement). Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) for PCB, grain size, and total organic carbon (TOC) analyses.

- On October 15, ARCADIS resurveyed existing erosion pin locations in Area 3. Per earlier discussions with USEPA and MDEQ, there was no oversight of these survey activities.

Site-Wide

- On August 15, CDM Smith forwarded to ARCADIS its Site-wide database update.
- On September 5, ARCADIS requested from MDNR an addendum to the August 20 Scientific Collector's Permit for fish sampling in the Kalamazoo River from Morrow Lake to Lake Allegan for the purpose of collecting fish samples for PCB analysis. On September 6, ARCADIS obtained a Scientific Collector's Permit Addendum from the MDNR. On January 24, ARCADIS submitted to MDNR a scientific collector's permit report regarding the 2012 fish collection. The Scientific Collector's Permit was issued as per Part 487, Section 324.48735 of Michigan Act 451 P.A. 1994.
- During the weeks of November 5 and 12, ARCADIS collected fish samples from Morrow Lake, from near D Avenue, from the former Otsego Impoundment, and from Lake Allegan for PCB and lipid analysis.

Task 3. Remedial Investigation Report (including ecological and human health risk assessment)

Area 1 SRI Report

- On August 2, MDEQ forwarded to USEPA its final comments on the Area 1 SRI Report; MDEQ forwarded these comments to ARCADIS on the same day.
- On August 21, ARCADIS submitted to USEPA the final Area 1 SRI Report. This report satisfies the requirements of paragraph 33b of the AOC and Task 3 of the associated SOW.
- On January 24, ARCADIS transmitted to MDEQ spreadsheets from Appendix J of the Area 1 SRI Report regarding calculation of surface-area-weighted average PCB concentrations and PCB mass estimates.

Area 2 SRI Report

- On November 1, ARCADIS submitted the Area 2 SRI Report to USEPA. This report is submitted in accordance with paragraph 33b of the AOC and Task 3 of the associated SOW.
- On November 28, ARCADIS transmitted to CDM Smith a database update containing the last of the Area 2 SRI data.

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Task 4. Treatability Studies (if needed)

- No meetings, submittals, or notifications.

Task 5. Development of Screening Alternatives (Technical Memorandum)

Area 1 ASTM

- On August 1, ARCADIS received comments from USEPA regarding the Area 1 ASTM. Note that the letter, received via email, was dated July 31.
- On August 10, ARCADIS received comments from MDEQ regarding the Area 1 ASTM and a spreadsheet used in the development of a graph attached to the comment letter.
- On August 22, ARCADIS submitted to USEPA and MDEQ draft responses to comments received from USEPA regarding the Area 1 ASTM.
- On August 29, ARCADIS, Georgia-Pacific, USEPA, and MDEQ participated in a conference call regarding agency comments on the Area 1 ASTM.
- On September 6, ARCADIS provided to MDEQ a letter regarding its comments on the Area 1 ASTM, which included a number of preliminary responses to comments.
- On September 12, Georgia-Pacific, ARCADIS, USEPA, and MDEQ participated in a conference call to discuss MDEQ's comments on the Area 1 ASTM.
- On November 26, ARCADIS submitted the final responses to USEPA and MDEQ comments on the Area 1 ASTM.

Area 2 ASTM

- On August 13, ARCADIS submitted to USEPA a request to defer the submittal date for the *Area 2 Alternatives Screening Technical Memorandum* until after review and revision (if necessary to incorporate Agency comments) of the draft Area 2 SRI Report. USEPA approved the request on October 11.

Task 6. Detailed Analysis of Alternatives (FS Report)

- On October 30, ARCADIS submitted the draft Area 1 FS Report to USEPA by email and forwarded hard copies the following day. This report is submitted in accordance with Task 5.1 of the SOW.
- On December 20, Georgia-Pacific, ARCADIS, USEPA, and MDEQ participated in a conference call to discuss preliminary verbal comments on the draft Area 1 FS Report.

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- On January 16, Georgia-Pacific, ARCADIS, USEPA, and MDEQ participated in a conference call to discuss preliminary verbal comments on the *Area 1 FS Report*.

**Task 7. Progress Reports**

- The six monthly progress reports generated during the August 2012 to January 2013 period were submitted on time, as required by Section 7.1 of the SOW, paragraph 19a of the 2007 AOC for Removal Action (Docket No. V-W-07-C-863), and paragraph 19a of the 2009 AOC for Removal Action (Docket No. V-W-09-C-925).
- The eleventh Semi-Annual Progress Report for Area 1, which included an update to the master schedule, was submitted to USEPA on August 15, as required by Section 7.2 of the SOW.

**Exhibit A. Schedule for Major Deliverables**

- As per Section D of Exhibit A, the master schedule for all areas and OUs was evaluated. Possible modifications will be discussed with USEPA in February.

**Annual Area-Specific Work Reports for the Allied Paper, Inc./Portage Creek/  
Kalamazoo River Superfund Site SRI/FS  
AREA 4 (OTSEGO DAM TO TROWBRIDGE DAM – FORMER TROWBRIDGE IMPOUNDMENT)  
AREA 5 (ALLEGAN CITY IMPOUNDMENT)  
AREA 6 (LAKE ALLEGAN)  
AREA 7 (CALKINS BRIDGE DAM TO LAKE MICHIGAN)**

**REPORT #6, AUGUST 2012 TO JANUARY 2013**

**Summary of Overall Progress in Completing Work Required by the AOC and SOW**

**Areas 4 through 7**

- On September 27, ARCADIS hosted a site tour of Area 4 and an Area 4 SRI/FS planning meeting with USEPA and MDEQ. This site tour was conducted in accordance with Section 1.1.3 of the SOW. The agenda was distributed on September 11.
- On November 30, ARCADIS submitted the draft *Area 4 Supplemental Remedial Investigation/Feasibility Study Work Plan* (Area 4 SRI/FS Work Plan) to USEPA. This plan was submitted in accordance with Section 1.3 of the SOW.
- On December 6, ARCADIS forwarded to USEPA and MDEQ geo-referenced historical aerial photographs and shorelines presented in the Area 4 SRI/FS Work Plan.
- Georgia-Pacific awaits USEPA's comments the Area 4 SRI/FS Work Plan, submitted November 30.